

ABSTRACT OF THE DISCLOSURE

5 The technique of the present invention carries out image processing
of image data, which are to be supplied to an image display apparatus
having a less number of expressible tones than a number of tones included
10 in original image data and a non-linear display characteristic. The
procedure of the present invention takes into account the non-linear display
characteristic of the image display apparatus and corrects a tone value with
regard to each pixel with a look-up table, so as to enhance a tone
distribution corresponding to an area of wide intervals of output lightness,
15 while reducing a tone distribution corresponding to an area of narrow
intervals of the output lightness. The procedure then carries out a
dispersion-type halftoning process for color reduction to convert the
corrected tone values to display tone values expressible by the image display
apparatus. A plurality of lookup tables is provided corresponding to a
20 plurality of settings for a predetermined condition, such as environmental
temperature, affecting the display characteristic of the image display
apparatus. The selected lookup table is changeable according to a current
setting of the predetermined condition. This technique of the present
invention effectively improves the picture quality of resulting displayed
images on the image display apparatus.